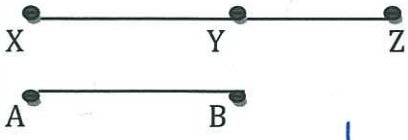
Name: _____ **TP:** _____

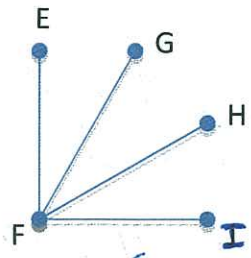
CW#32-34H: Review
Honors Geometry

1) Given: XY = AB
Prove: AB + YZ = XZ



S	R
(1) XY = AB	(1) Given
(2) XY + YZ = XZ	(2) segment addition postulate
(3) AB + YZ = XZ	(3) substitution

2) Given: $\angle EFG \cong \angle HFI$
Prove: $\angle EFH \cong \angle GFH + \angle HFI$

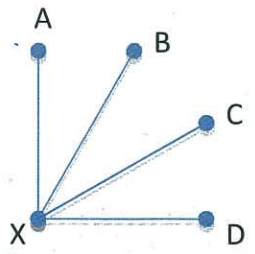


S	R
(1) $\angle EFG \cong \angle HFI$	(1) Given
(2) $\angle GFH \cong \angle GFH$	(2) Reflexive
(3) $\angle EFG + \angle GFH = \angle GFH + \angle HFI$	(3) addition prop
(4) $\angle EFG + \angle GFH = \angle EFH$	(4) angle addition post
(5) $\angle GFH + \angle HFI = \angle GFI$	(5) angle addition post
(6) $\angle EFH \cong \angle GFI$	(6) substitution

3) Given: AB ≅ CD
Prove: AC ≅ BD

S	R
(1) AB = CD	(1) Given
(2) BC = BC	(2) Reflexive
(3) AB + BC = CD + BC	(3) Addition Prop
(4) AB + BC = AC	(4) segment addition
(5) BC + CD = BD	(5) Post
(6) AC = BD	(6) substitution

4) Given: $\angle AXB \cong \angle CXD$
Prove: $\angle AXC \cong \angle BXD$



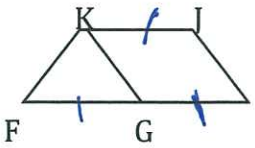
S	R
(1) $\angle AXB = \angle CXD$	(1) Given
(2) $\angle BXC = \angle BXC$	(2) Reflexive
(3) $\angle AXB + \angle BXC = \angle CXD + \angle BXC$	(3) addition prop
(4) $\angle AXB + \angle BXC = \angle AXC$	(4) angle + post
(5) $\angle BXC + \angle CXD = \angle BXD$	(5)
(6) $\angle AXC = \angle BXD$	(6) substitution

PUSH IT TO THE LIMIT.

5) Given: AC = BD
Prove: AB = CD

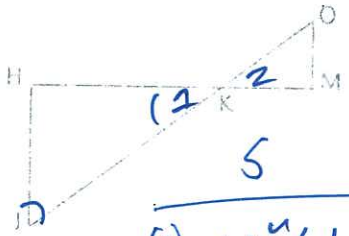
S	R
(1) AC = BD	(1) Given
(2) AB + BC = AC	(2) segment +
(3) BC + CD = BD	(3) Post
(4) AB + BC = BC + CD	(4) substitution
(5) AB = CD	(5) subtraction

6) Given: FG ≅ KJ
GH ≅ KJ
Prove: FG ≅ GH



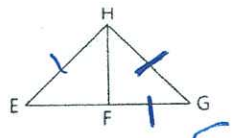
S	R
(1) FG ≅ KJ	(1) Given
(2) GH ≅ KJ	(2) given
(3) KJ ≅ GH	(3) symmetric
(4) FG = GH	(4) transitive

7) Given: $\angle J \cong \angle 1$
Prove: $\angle J \cong \angle 2$



S	R
(1) $\angle J \cong \angle 1$	(1) Given
(2) $\angle 1 \cong \angle 2$	(2) vertical $\angle$'s
(3) $\angle J \cong \angle 2$	(3) transitive

8) Given: HE ≅ HG
FG ≅ HG
Prove: HE ≅ FG



S	R
(1) HE ≅ HG	(1) Given
(2) FG ≅ HG	(2) Given
(3) HG = FG	(3) symmetric
(4) HE = FG	(4) transitive

Look over CW and HW #32-34H. Use your Notes to Review:

1) What are the algebraic properties?
2) What does reflexive, symmetric and transitive mean? Give examples of each.
3) Go over/rewrite proofs that you struggled with.

PUSH IT TO THE LIMIT.

CW #32-34 Review

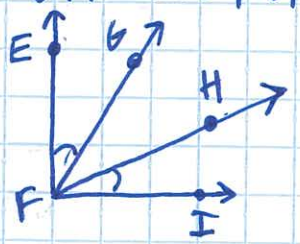
A proof is an argument that begins with facts, proceeds from there through a series of logical deductions, and ends with what you are trying to prove.

Postulate- statements that are assumed to be true without proof

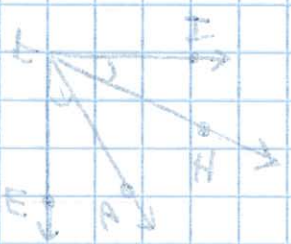
Theorem- can be proved from definitions, postulates or previously proved theorems

Example

Given: $\angle EFG \cong \angle HFI$ Prove: $\angle EFH \cong \angle GFI$



S	R
① $\angle EFG \cong \angle HFI$	① Given
② $\angle GFH \cong \angle GFH$	② Reflexive
③ $\angle EFG + \angle GFH \cong \angle HFI + \angle GFH$	③ Addition Prop of $\cong$
④ $\angle EFG + \angle GFH = \angle EFH$	④ angle addition prop
⑤ $\angle GFH + \angle HFI = \angle GFI$	⑤ angle addition prop
⑥ $\angle EFH \cong \angle GFI$	⑥ substitution


E
H
A